Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte ATSUHITO NODA, SHIGEYUKI HOSHIKAWA
and SHIGERU ANDO

_____

Appeal No. 2000-0967
Application 08/932,545

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ON BRIEF

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Before KRASS, JERRY SMITH and LEVY, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-17, which constitute all the claims in the application.

The disclosed invention pertains to a flexible printed circuitry member comprising an elongated flexible insulating substrate having a plurality of conductors on one side of the substrate and a conductive grounding grid on the opposite side of the substrate. A particular feature of the invention is that the

grounding grid has a substantially random geometric pattern.

Representative claim 1 is reproduced as follows:

1. A flexible printed circuitry member, comprising:

an elongated flexible insulating substrate;

a plurality of first conductors being deposited on and extending longitudinally along one side of the insulating substrate; and

a conductive grounding grid being deposited on the insulating substrate on a side opposite said one side of the insulating substrate, the grounding grid having a substantially random geometric pattern.

The examiner relies on the following references:

Cox	4,678,864	July 7, 1987

The admitted prior art described in appellants' specification.

Claims 1-17 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers the admitted prior art in view of Cox.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the

rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-17. Accordingly, we reverse.

Appellants have indicated that for purposes of this appeal the claims will all stand or fall together as a single group [brief, page 13]. Consistent with this indication appellants have made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Therefore, we will consider the rejection against independent claim 1 as representative of all the claims on appeal.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to

support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of

the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived by appellant [see 37 CFR § 1.192(a)].

With respect to representative, independent claim 1, the examiner notes that the admitted prior art teaches the claimed invention except for the grounding grid having a substantially random geometric pattern. The examiner cites Cox as teaching a grounding grid of this type. The examiner finds that it would have been obvious to the artisan to replace the grounding grid of the admitted prior art with the grounding grid of Cox because they are equivalent grounding means [answer, pages 3-4].

Appellants argue, inter alia, that Cox is not directed to a flexible printed circuit member, that Cox does not teach or suggest that the ground plane conductor should have a random geometric pattern, that the grounding grid mesh of Cox cannot be used in the flexible printed circuitry member of the admitted

prior art, and that the admitted prior art and Cox do not teach or suggest the problem solved by the claimed grounding grid [brief].

The examiner responds that even though there is no disclosure in Cox regarding the ground plane having a random geometric pattern, this fact is apparent from the drawings. The examiner also notes that appellants have not provided any reason why the grounding grid of Cox cannot be used in a flexible circuitry member. The examiner also responds that it would have been obvious to the artisan to substitute the grounding grid of Cox for the equivalent grounding grid of the admitted prior art since they are functional equivalents [answer, pages 5-6].

Appellants respond that the grounding grid of Cox does not have a substantially random geometric pattern as claimed, and appellants dispute the various findings made by the examiner [reply brief].

We agree with the position argued by appellants. Most importantly, we find that Cox does not teach or suggest that the ground plane conductor 30 should have a substantially random geometric pattern. As admitted by appellants and the examiner, there is no mention in the disclosure of Cox of this particular property. The examiner's finding is based entirely on the

drawings wherein in Figures 1 and 3, the lines forming the pattern on the ground plane appear slightly irregular. Although appellants argue that this irregularity is nothing more than an expected deviation from perfection in manufacturing the copper mesh of Cox and is not a random geometric pattern as claimed, the examiner insists that the irregular pattern shown in Figures 1 and 3 of Cox is a substantially random geometric pattern. Even if the examiner is correct that the ground plane conductor 30 of Cox could be substituted for the grounding grid of the admitted prior art, a position which appellants dispute, we agree with appellants that the slightly irregular pattern shown in Cox's figures cannot be interpreted by itself to be a substantially random geometric pattern. In our view, the artisan would not have interpreted the pattern in Cox as being random nor would the artisan have drawn any inferences regarding the value of a substantially random geometric pattern.

In summary, the examiner's primary finding that the pattern shown in cox is a substantially random geometric pattern is not supported by this record. We also agree with appellants that the examiner has not properly responded to the question of why the irregularities of the Cox mesh would appear in a grounding grid formed on a printed circuitry member as disclosed

in the admitted prior art. The irregularities appear to be undesired and are an inherent property of a mesh which would not appear when the conductors are directly deposited onto a substrate. Since Cox discloses no advantages obtained from the irregularities, there is no basis to add inherent mesh irregularities to the grounding grid of the admitted prior art.

In conclusion, we do not sustain the examiner's rejection of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1-17 is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)	
JERRY SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
STUART S. LEVY Administrative Patent Judge	)	

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CHARLES S. COHEN
MOLEX INCORPORATED
2222 WELLINGTON COURT
LISLE, IL 60532

JS:caw